

Engineering Division
W/OSO321:FLP

NOAA WIND PROFILER MODIFICATION NOTE 1

(for Electronics Technicians)

SUBJECT	:	Hard Start Kits for Air Conditioners				
PURPOSE	:	Decrease the possibility of tripping air conditioner a.c. circuit breakers during "short cycle" conditions				
EQUIPMENT AFFECTED	:	Wind profiler				
PARTS REQUIRED	:	<table><tr><th><u>Qty.</u></th><th><u>Description</u></th></tr><tr><td>2</td><td>SPP-6 Super-Boost Kits</td></tr></table>	<u>Qty.</u>	<u>Description</u>	2	SPP-6 Super-Boost Kits
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2	SPP-6 Super-Boost Kits					
MOD PROCUREMENT	:	Each station will receive the required kits. No initial action required.				
SPECIAL TOOLS REQUIRED	:	Square head screwdrivers (Canadian style)				
TIME REQUIRED	:	1 work hour, plus travel				
EFFECT ON OTHER INSTRUCTIONS	:	None. File this note in EHB-9.				
CERTIFICATION	:	This modification was successfully tested at several wind profiler sites.				

General

The air conditioners are prone to trip their a.c. breakers when the units turn off and on without enough time for the pressures in the unit to equalize. This "short cycling" of the power causes the units to draw excessive current. The Hard Start Kit increases the starting torque capacity of the air conditioners.

EHB-9
Issuance 91-7
11-1-91

Procedure

A. Installation

To perform the installation, proceed as follows:

Note: Install one kit at a time. Do not turn both air conditioners off at once. Leave one unit on to maintain shelter temperature while modifying the other unit.

1. Turn air conditioner circuit breaker off and unplug power cord.
2. Remove the two flat head screws, one on each side of the air conditioner. Remove front cover and air filter.
3. Use the handle located on bottom front of unit and pull unit out from wall about 8 inches.
4. Remove the air sweep, fan setting, and temperature control knobs by pulling forward.
5. Remove the control panel face plate.
6. Remove the four screws shown in figure 1.
7. Remove the air sweep louver nut shown in figure 1.
8. Disconnect the air sweep plastic arm connected to fan motor. See figure 1.
9. Remove the thermostat sensor by pulling on sensor mount. Be careful not to bend or break thermostat line.
10. Pull the control panel out by gently lifting air sweep louver to allow back panel flange to slide under air sweep louver.
11. Refer to figure 2 and locate the air conditioner capacitor mounted upside down behind the control panel. It has three terminals, one with a brown wire, one with two red and one white wires, and one with a single white wire. See figure 3.
12. Connect one lead of the hard start unit to the single white wire terminal on the air conditioner capacitor. Connect the other lead of the hard start unit to the two red and one white wire terminal. See figure 3.

13. Attach the cable tie mount to the inside of the air conditioner. Insert a cable tie through the mount and secure the hard start unit. See figure 4.
14. Gently push the control panel back in place. Install four screws, one nut, plastic air sweep arm, thermostat sensor, control panel face plate, three control knobs, air filter, front cover and two screws.
15. Plug power cord in and turn circuit breaker on.

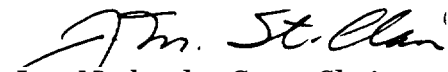
This completes the installation.

B. System Checkout

Make sure that each unit turns on. If necessary, use the bypass switch to engage each unit's power.

Reporting Modification

Target date for completion of the modification is 30 days after receipt of the kits. Report completed modifications on WS Form H-28, Engineering Progress Report, according to instructions in EHB-4, part 2, using reporting code PROF.



J. Michael St. Clair
Chief, Engineering Division

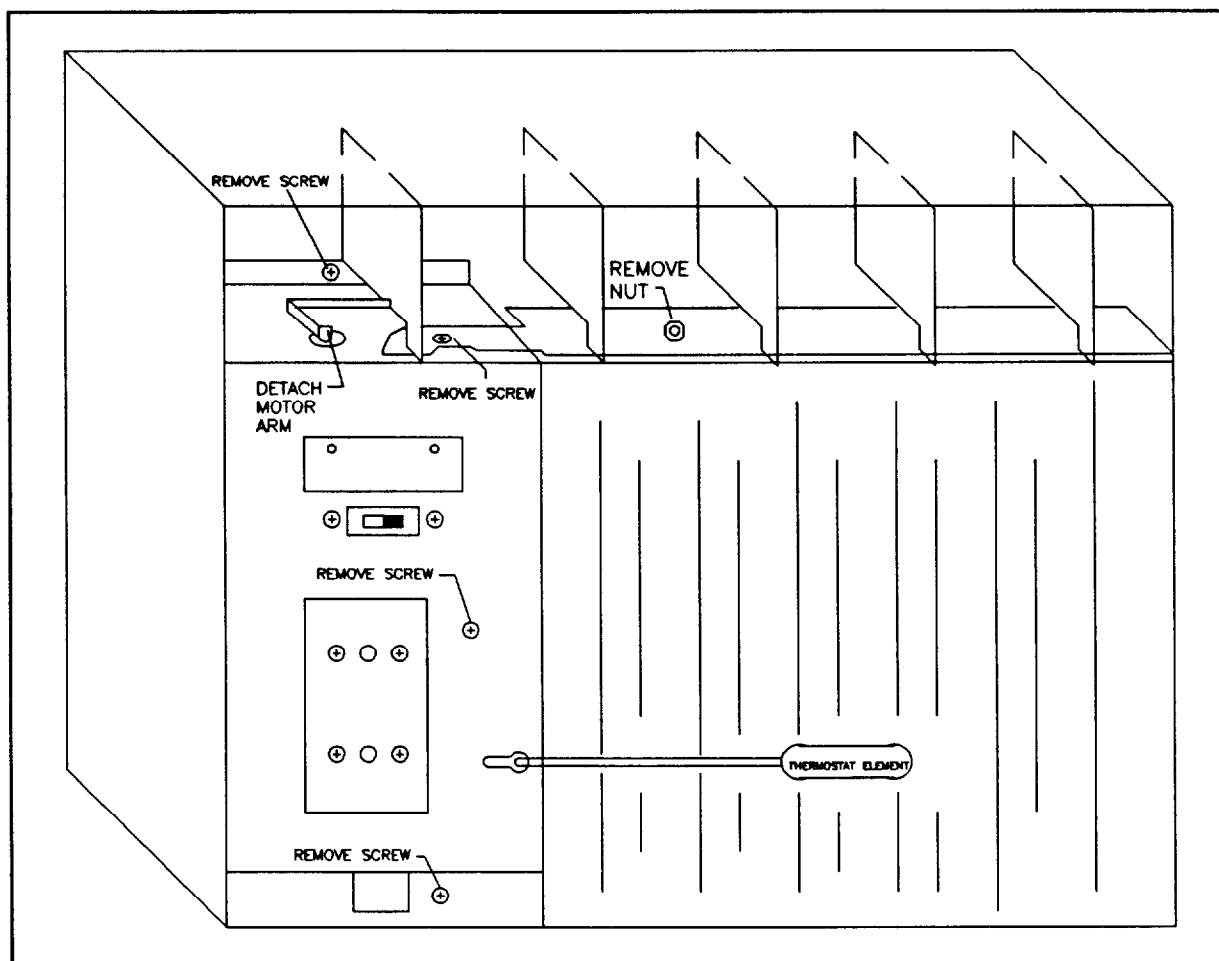


Figure 1 Air Conditioner with front cover and filter removed

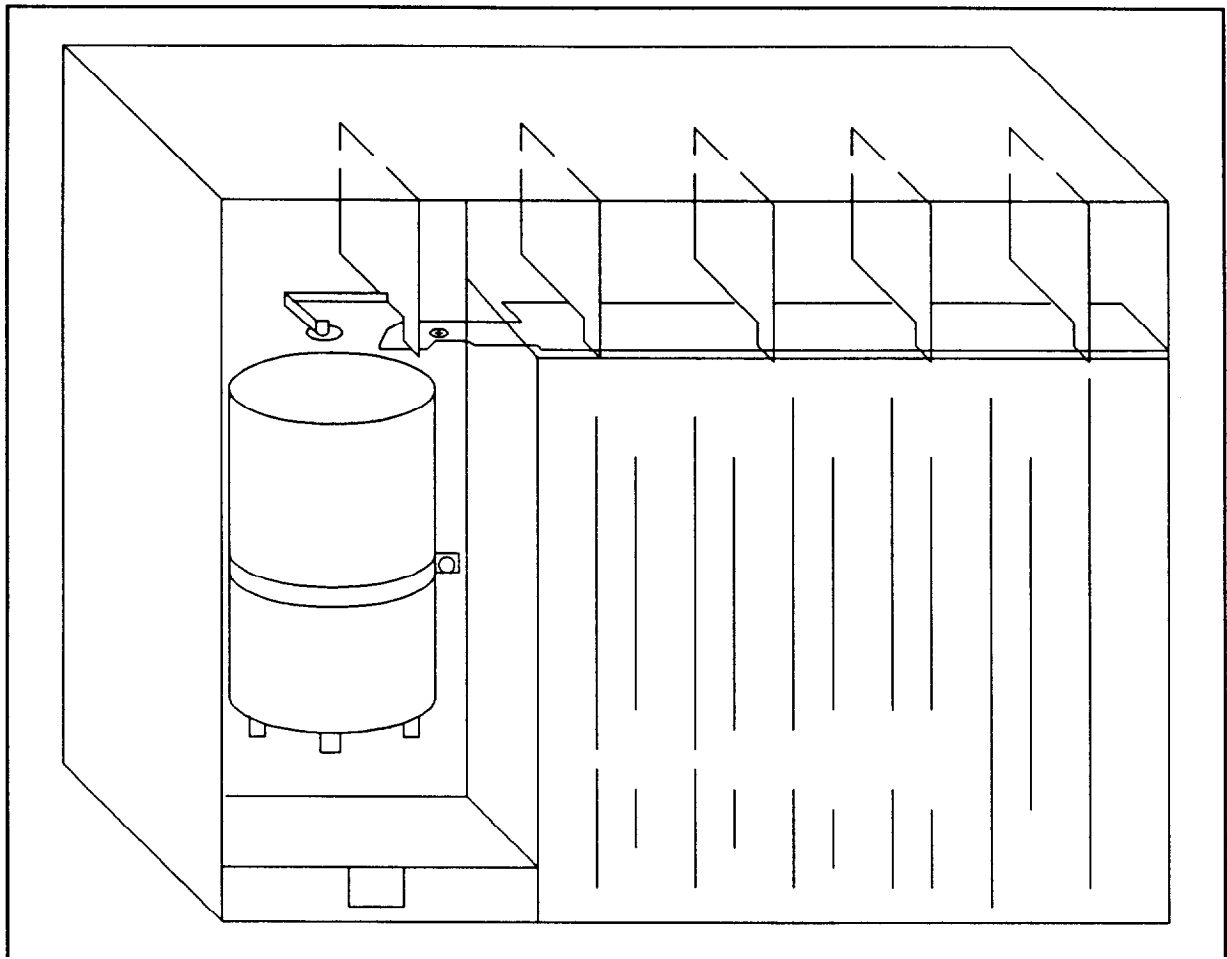


Figure 2 Air Conditioner with inner cover plate removed showing starting capacitor.

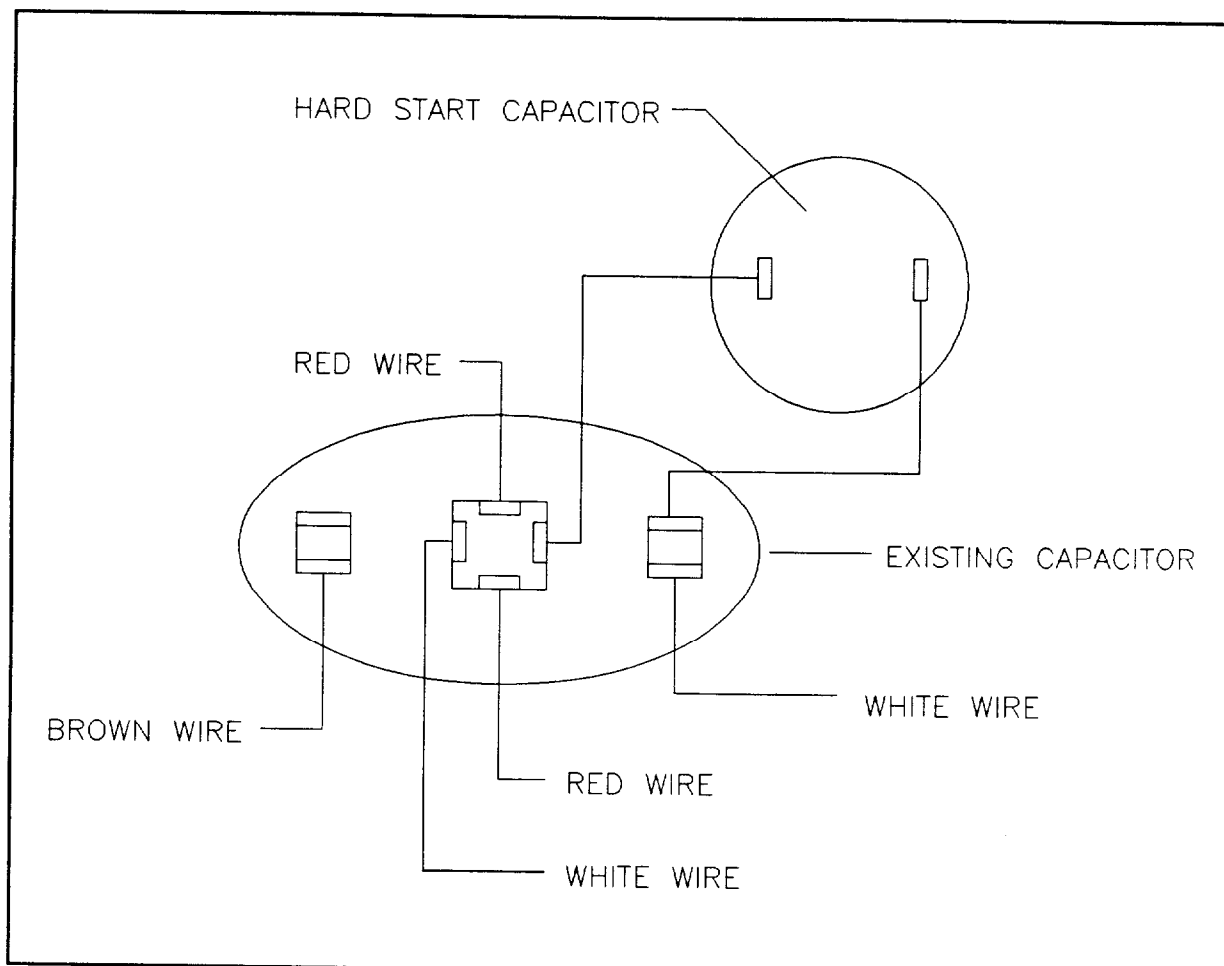


Figure 3 Connection of Hard Start Capacitor to existing Capacitor.

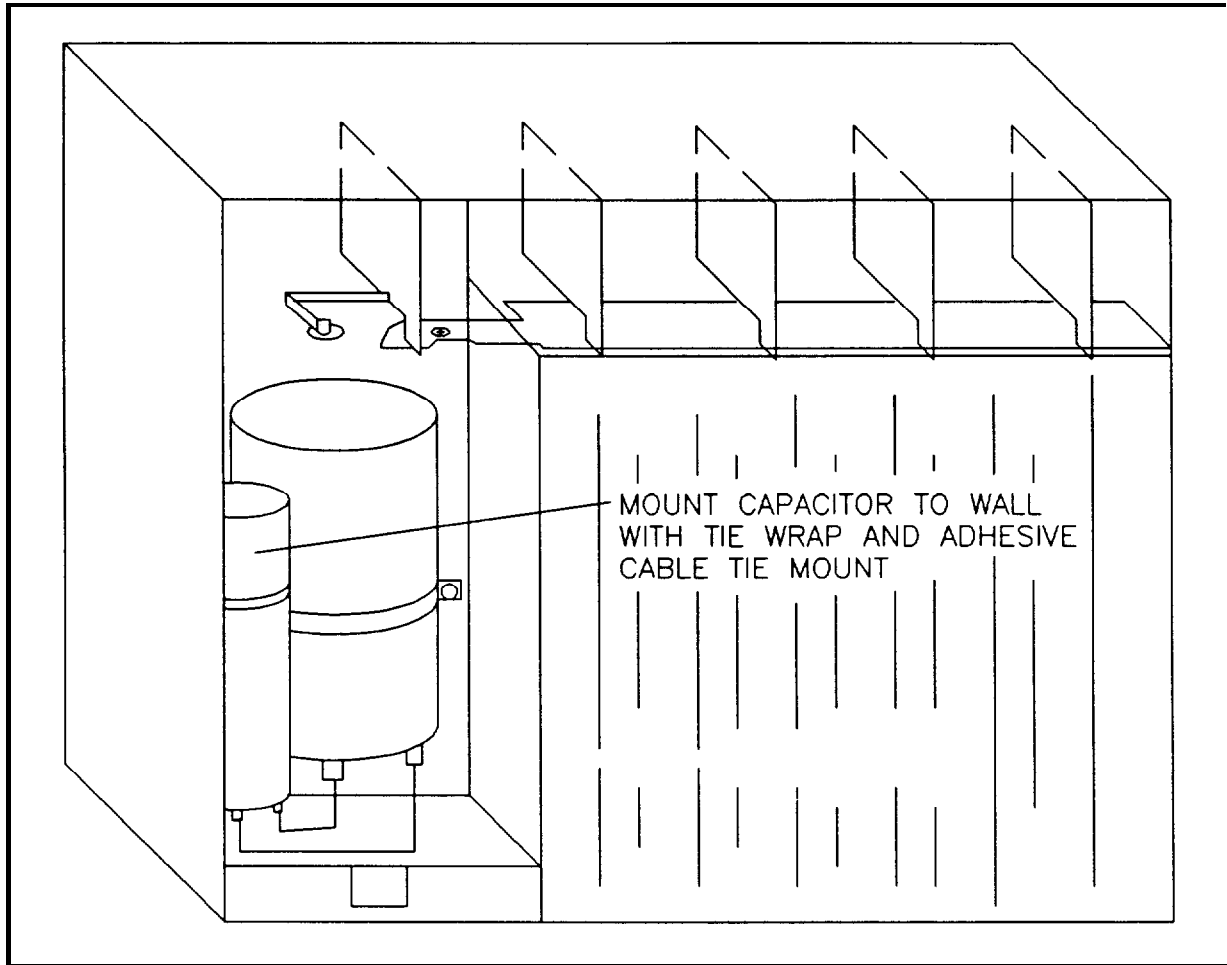


Figure 4 Munting of Hard Start Capacitor